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Notice of Allowability	Application No.	Applicant(s)	
	10/020,249	HOTTA ET AL.	
	Examiner	Art Unit	
	Vikkram Bali	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/29/2006.
2. ☒ The allowed claim(s) is/are 1-8, 10-17, 21, 24 (renumbered as 1-18).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard A. Gollhofer, #31,106 on 8/17/2006.

The application has been amended as follows:

Cancel claims 20, 22 and 23.

Amend claim 1 as follows:

1. (currently amended) A character string recognition apparatus, comprising:
a key character code extraction unit automatically extracting a code string of a key word which is a node of a character string from a character string category to be recognized and expressed as at least one character code, by extracting at least one of a first character having a first predetermined number of occurrences among a first set of character strings to be recognized, a second character having a second predetermined number of occurrences in a character string unit, and a second set of closely associated characters as the key word;
a key word extraction unit separating an image of the character string into images of individual characters, recognizing the individual character images and extracting as key word characters, a string of characters corresponding to the code string of the key word;

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a partial area extraction unit extracting a partial area falling between extracted key words from the image of the character string; and

a recognition unit holistically recognizing a character string in the partial area extracted by said partial area extraction unit.

24. (currently amended) A computer readable medium encoded with a computer program recognizing a character string image, said computer program controlling a processor to perform a method comprising:

automatically extracting a code string of a key word which is a node of a character string from a character string category to be recognized and expressed as a character code, by extracting at least one of a first character having a first predetermined number of occurrences among a first set of character strings to be recognized, a second character having a second predetermined number of occurrences in a character string unit and a second set of closely associated characters as the key word;

separating an image of the character string into images of individual characters;

recognizing the individual character images;

extracting the extracted key word or a part of the key word from a character string image;

holistically recognizing character strings in partial areas determined by the extracted key and words.

Allowable Subject Matter

2. Claims 1-8, 10-17, 21, 24 (renumbered as 1-18) are allowed.

3. The following is an examiner's statement of reasons for allowance:

Per the applicants extensive amendments and the arguments filled on 6/29/2006 all the rejections to the claims have been withdrawn and the claims are allowed.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 571.272.7415. The examiner can normally be reached on 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571.272.7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vikkram Bali
Primary Examiner
Art Unit 2624



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August 21, 2006